

What is claimed is:

1. An arrangement to facilitate vertical mounting of a subassembly circuit board on a system circuit board comprising:

a subassembly circuit board having a pair of major surfaces, a first edge to be mounted adjacent the system circuit board, and an opposing second edge;

a first base header to be mounted on the system circuit board comprising an elongated header and a plurality of mounting lugs attached to the header in co-planar configuration;

a second base header to be mounted on the system circuit board comprising an elongated header and a plurality of connector pins attached to the header in co-planar configuration;

wherein the first and second base headers are adapted to mechanically couple to the vertically mounted subassembly circuit board adjacent the first edge.

2. The subassembly of claim 1 wherein the circuit board comprises a plurality of openings and the base headers each include one or more projecting portions in registration with openings in the circuit board for aligning the base headers in relation to the circuit board and each other.

3. The subassembly of claim 1 wherein the circuit board comprises a plurality of openings, at least one base header includes a plurality of projecting portions in registration with openings in the circuit board, and the other base header includes a plurality of sockets in registration with projecting portions, whereby projecting portions can be inserted through the openings into the sockets to align the headers and interlock the headers with the circuit board.

4. The assembly of claim 1 wherein the first base header comprises a plurality of lugs, each lug a conductive body comprising a base section and a transverse section, the base section comprising a generally planar section for connecting to the major surface of the system board and the transverse section comprising a generally planar section substantially perpendicular to the base section for connecting to a major surface of the subassembly board.

5. The assembly of claim 4 wherein the base section has a width greater than the width of the transverse section and a length extending beyond the transverse section, so that the base section extends beyond the transverse section in front, behind and on both sides.

6. The apparatus of claim 1 wherein the mounting lugs are attached to the header by molding.

7. An arrangement to facilitate horizontal mounting of a subassembly circuit board on a system circuit board comprising:

an open frame to be mounted on the system circuit board, the frame having an open central region, an upper surface, a lower surface and first and second opposing arms;

the first opposing arm comprising a plurality of mounting lugs attached to the arm in coplanar configuration, each lug supporting the lower surface of the frame and including a support surface extending into the open central region of the frame to support and contact the subassembly circuit board horizontally mounted in the central region;

the second opposing arm comprising a plurality of connector pins attached to the arm in coplanar configuration, each pin supporting the lower surface of the frame and including a contact surface extending into the open central region of the frame to support and contact the subassembly circuit board horizontally mounted in the central region.

8. The arrangement of claim 7 wherein the frame is attached and connected to a system board by the lugs and the connector pins.

9. The arrangement of claim 8 wherein a subassembly circuit board is mounted in the open central region and connected to the systems board by the lugs and the connector pins.

10. The arrangement of claim 9 wherein the subassembly circuit board includes one or more power converters and each power converter is connected to the motherboard by one or more lugs.

11. The arrangement of claim 1 wherein the mounting lugs and connector pins are attached to the frame by molding.